Filing Date: July 7, 2003
Title: UNIFORM CHANNEL SPREADING IN A WIRELESS LOCAL AREA NETWORK USING DYNAMIC FREQUENCY SELECTION

REMARKS

In response to the final Office Action dated October 28, 2008, Applicants request reconsideration of the above-identified application in view of the following remarks. Claims 1, 3-7, 9-13, 16, 17, and 20 are pending in the application, and are rejected. Claim 13 is amended. No new matter has been added.

Claim Amendments

Claim 13 is amended to correct matters of form only. The amendment is not a narrowing amendment, and was not made in response to any requirement stated in the final Office Action.

Rejections of Claims Under \$103

Applicants previously cited *Graham v. John Deere*, ¹ KSR Int'l. v. Teleflex Inc., ² and In re Warner³ in the response filed on July 10, 2008. In addition to those cases, Applicants note that the CCPA in In re Sponnoble stated that "[t]he court must be ever alert not to read obviousness into an invention on the basis of the applicant's own statements; that is, we must view the prior art without reading into that art appellant's teachings." Subsequent to KSR, In re Sponnoble remains good law for the proposition noted.

Claims 1 and 3-5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Koohgoli et al. (U.S. Patent 5,276,908, Koohgoli) in view of Frixon (U.S. Patent No. 5,138,456). Applicants respectfully traverse.

Koohgoli relates to dynamic channel allocation and mentions scanning available traffic channels in a wireless communication system with base stations and subscriber terminals.

Koohgoli does not show "determining a larger gap between available channels" and "selecting a channel within the larger gap" as is recited in independent claim 1.

¹ Graham v. John Deere Co., 148 USPQ 459 (1966).

² KSR Int'l. v. Teleflex Inc., 82 USPQ2d 1385 (2007).

³ In re Warner, 154 USPO 173 (CCPA 1967).

⁴ In re Sponnoble, 160 USPQ 237, 243 (CCPA 1969).

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Frixon relates to the transmission of video signals between 400 and 800 MHz. Frixon describes a camera that scans the range of frequencies between 400 and 800 MHz and then selects a free channel on which to transmit to a television. The frequency selected is displayed on a display device and a user must adjust a television set to pick up transmissions from the camera. Frixon depends on a human user to tune a television to a frequency selected as a result of a scan. Frixon is very different from Koohgoli, so different that it is non-analogous art. One skilled in the art using common sense would not have looked to Frixon to modify Koohgoli.

In addition, Koohgoli teaches away from the combination proposed in the final Office Action. Koohgoli states that the base station scans available traffic channels, and sends a "subscriber terminal a list of available traffic channels upon which a call would be acceptable." The subscriber terminal scans the channels on the list, and then prioritize its preferences for the base station. Koohgoli states specifically that both the base station and the subscriber terminal must scan the available channels as the channel with the least interference as scanned by the subscriber terminal may not be the channel with the least interference as scanned by the base station. In Koohgoli it is necessary that the base station supply the subscriber terminal with a list of available channels. In contrast, only the camera in Frixon carries out a scan and selects an emission frequency. The television plays no role in selecting the emission frequency in Frixon. One skilled in the art using common sense would not have looked to Frixon to modify Koohgoli because the activity all takes place in the camera, and the selection of the emission frequency is not the result of an interaction between two devices.

The final Office Action cited *In re Oetiker*⁶ in response to Applicant's remarks. The Federal Circuit said in *Oetiker*:

[I]t is necessary to consider...common sense – in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor...The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness.

Both claims 4 and 5 recite "selecting a larger gap at a higher frequency." Neither Frixon nor Koohgoli show this feature, so, even as combined, Frixon and Koohgoli do not show all of

⁵ Koohgoli, column 8, lines 18-29.

⁶ In re Oetiker, 24 USPQ2d 1443 (Fed. Cir. 1992).

⁷ In re Oetiker, 24 USPO2d at 1446.

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the features recited in claims 4 and 5. The final Office Action on pages 4-5 indicates that features recited in rejected claims 4 and 5 were a matter of design choice. In re Warner indicates that "[a] rejection based on section 103 clearly must rest on a factual basis." The rejection of the features of claims 4 and 5 is not founded on a factual basis such as a reference, but rather is supported only by speculation called "design choice" contrary to In re Warner. Applicants respectfully request that this rejection be withdrawn.

The final Office Action has not identified a factual basis or a rational underpinning that supports a modification of Koohgoli by Frixon, and has instead relied on hindsight reconstruction to reject claims 1 and 3-5. Applicants respectfully submit that a prima facie case of obviousness of claims 1 and 3-5 has not been established in the final Office Action, and that claims 1 and 3-5 are in condition for allowance.

Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Koohgoli in view of Frixon (U.S. 5,138,456) and Lopez (U.S. 7,177,291 B1). Applicants respectfully traverse.

Claim 6 is dependent on independent claim 1, and recites further features with respect to claim 1. For the reasons stated above with respect to claim 1, Applicants respectfully submit that one skilled in the art using common sense would not have looked to Frixon to modify Koohgoli.

Claim 6 recites a "method as claimed in claim 1, further comprising determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning." The words "executing the method again at said scanning" in claim 6 refer to the method of claim 1 and the feature "scanning available channels." Lopez does not show this feature.

Lopez shows in Figure 2 a flowchart in which "polling of channels" is repeated until a "desired network channel" is found. Thereafter, no polling occurs in Lopez. If a collision is detected afterwards, the terminal requests a change of frequency.8 Lopez describes the terminal requesting a change of frequency from the local network N1.9 Lopez does not return to polling channels after the desired network channel is found even if a collision is detected, as shown in Figure 2. Lopez does not show "executing the method again at said scanning" recited in claim 6.

⁸ Lopez, Figure 2.

⁹ Lopez, column 3, lines 45-55.

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Therefore, even as combined, Koohgoli, Frixon and Lopez do not show all of the features recited in claim 6.

Applicants respectfully submit that a prima facie case of obviousness of claim 6 has not been established in the final Office Action, and that claim 6 is in condition for allowance.

Claims 7 and 9-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Choi et al. (U.S. 7,206,842 B2) in view of Frixon. Applicants respectfully traverse.

Choi relates to dynamic frequency selection and describes "monitoring of channels" which includes "(1) channel measurement by AP; (2) request for channel measurement by AP; and, (3) measurement report by STAs."10 Choi describes channel measurements by both the AP and the STAs. The AP then "determines a new channel that is used for communication between the AP and the STAs."11

Choi does not show "determining a larger gap between available channels" and "selecting a channel within the larger gap" as is recited in independent claim 7.

Frixon relates to the transmission of video signals between 400 and 800 MHz. Frixon describes a camera that scans the range of frequencies between 400 and 800 MHz and then selects a free channel on which to transmit to a television. The frequency selected is displayed on a display device and a user must adjust a television set to pick up transmissions from the camera. Frixon depends on a human user to tune a television to a frequency selected as a result of a scan. Frixon is very different from Choi, so different that it is non-analogous art. One skilled in the art using common sense would not have looked to Frixon to modify Choi.

In addition, Choi teaches away from the combination proposed in the final Office Action. Choi describes that both the AP and the STAs make channel measurements. In contrast, only the camera in Frixon carries out a scan and selects an emission frequency. The television plays no role in selecting the emission frequency in Frixon. One skilled in the art using common sense would not have looked to Frixon to modify Choi because the activity all takes place in the camera, and the selection of the emission frequency is not the result of an interaction between two devices.

¹⁰ Choi, column 4, lines 20-23.

¹¹ Choi, column 7, lines 63-65.

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Both claims 10 and 11 recite "selecting a larger gap at a higher frequency." Neither Frixon nor Choi show this feature, so, even as combined, Frixon and Choi do not show all of the features recited in claims 10 and 11. The final Office Action on pages 18-19 indicates that features recited in rejected claims 10 and 11 were a matter of design choice. In re Warner indicates that "[a] rejection based on section 103 clearly must rest on a factual basis." The rejection of the features of claims 10 and 11 is not founded on a factual basis such as a reference, but rather is supported only by speculation called "design choice" contrary to In re Warner. Applicants respectfully request that this rejection be withdrawn.

The final Office Action has not identified a factual basis or a rational underpinning that supports a modification of Choi by Frixon, and has instead relied on hindsight reconstruction to reject claims 7 and 9-11. Applicants respectfully submit that a prima facie case of obviousness of claims 7 and 9-11 has not been established in the final Office Action, and that claims 7 and 9-11 are in condition for allowance.

Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Choi in view of Frixon and Lopez (U.S. 7,138,456). Applicants respectfully traverse.

One skilled in the art using common sense would not have looked to Frixon to modify Choi for the reasons stated above with respect to claim 7.

Furthermore, claim 12 recites an "article as claimed in claim 7, wherein the instructions when executed further result in dynamic frequency selection in a wireless local area network by determining whether a collision is detected at the channel selected in said selecting, and, if a collision is detected, selecting a new channel by executing the method again at said scanning." The words "executing the method again at said scanning" in claim 12 refer to the article of claim 7 and the feature "scanning available channels." Lopez does not show this feature.

Lopez shows in Figure 2 a flowchart in which "polling of channels" is repeated until a "desired network channel" is found. Thereafter, no polling occurs in Lopez. If a collision is detected afterwards, the terminal requests a change of frequency. 12 Lopez describes the terminal requesting a change of frequency from the local network N1.13 Lopez does not return to polling channels after the desired network channel is found even if a collision is detected, as shown in

13 Lopez, column 3, lines 45-55.

¹² Lonez, Figure 2.

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Figure 2. Lopez does not show "executing the method again at said scanning" recited in claim 12. Therefore, even as combined, Choi, Frixon and Lopez do not show all of the features recited in claim 12

Applicants respectfully submit that a prima facie case of obviousness of claim 12 has not been established in the final Office Action, and that claim 12 is in condition for allowance.

Claims 13 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Choi in view of Sugar et al. (U.S. 7,248,604 B2) further in view Frixon. Applicants respectfully traverse.

Choi relates to dynamic selection of a channel between an access point and a plurality of stations. Sugar relates to a wireless communications network. Neither Choi nor Sugar show "selecting a larger gap at a higher frequency" and "selecting a channel from a channel indicated as available within the larger gap at a higher frequency," of the features recited in independent claim 13.

Frixon relates to the transmission of video signals and describes selecting "an emission frequency located substantially in the middle of the largest interval separating two channels." Frixon, column 4, lines 38-44. Frixon does not show "selecting a channel from a channel indicated as available within the larger gap at a higher frequency" as is recited in independent claim 13. Therefore, even as combined, Choi, Sugar, and Frixon do not show all of the features recited in claim 13.

As stated above with respect to claims 3 and 5, Frixon only relates to the transmission of video signals between 400 and 800 MHz. Furthermore, Frixon describes a camera that scans the range of frequencies between 400 and 800 MHz and then selects a free channel on which to transmit to a television. The frequency selected is displayed on a display device and a user must adjust a television set to pick up transmissions from the camera. Frixon depends on a human user to tune a television to a frequency selected as a result of a scan. Frixon is very different from both Choi and Sugar, so different that it is non-analogous art. One skilled in the art using common sense would not have looked to Frixon to modify Choi or Sugar.

The final Office Action on pages 23-24 indicated that features recited in rejected claims 13 and 16 were a matter of design choice. In re Warner indicates that "[a] rejection based on

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section 103 clearly must rest on a factual basis." The rejection of the features of claims 13 and 16 is not founded on a factual basis such as a reference, but rather is supported only by speculation called "design choice" contrary to *In re Warner*. Applicants respectfully request that this rejection be withdrawn.

The final Office Action has not identified a factual basis or a rational underpinning that supports this combination of references, and has instead relied on hindsight reconstruction to reject claims 13 and 16. Applicants respectfully submit that a *prima facie* case of obviousness of claims 13 and 16 has not been established in the final Office Action, and that claims 13 and 16 are in condition for allowance.

Claims 17 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Choi in view of Sugar, Pope, Jr. et al. (U.S. 6,654,616 B2) and Frixon. Applicants respectfully traverse.

Choi relates to dynamic selection of a channel between an access point and a plurality of stations. Sugar relates to a wireless communications network. Pope relates to a wireless area network. Neither Choi nor Sugar nor Pope show "selecting a larger gap at a higher frequency" and "selecting a channel from a channel indicated as available within the larger gap at a higher frequency" of the features recited in independent claim 17.

As stated above with respect to claims 13 and 16, Frixon does not show "selecting a channel from a channel indicated as available within the larger gap at a higher frequency" as is recited in independent claim 17. Therefore, even as combined, Choi, Sugar, Pope, and Frixon do not show all of the features recited in claim 17.

As stated above with respect to claims 13 and 16, Frixon is non-analogous art.

The final Office Action on pages 27-28 indicated that features recited in rejected claims 17 and 20 were a matter of design choice. *In re Warner* indicates that "[a] rejection based on section 103 clearly must rest on a factual basis." The rejection of the features of claims 17 and 20 is not founded on a factual basis such as a reference, but rather is supported only by speculation called "design choice" contrary to *In re Warner*. Applicants respectfully request that this rejection be withdrawn.

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The final Office Action has not identified a factual basis or a rational underpinning that supports this combination of references, and has instead relied on hindsight reconstruction to reject claims 17 and 20. Applicants respectfully submit that a prima facie case of obviousness of claims 17 and 20 has not been established in the final Office Action, and that claims 17 and 20 are in condition for allowance.

In re Keller

The final Office Action cited In re Keller and In re Merck & Co. for the statement in In re Keller that "one cannot show non-obviousness by attacking references individually."14 Applicants have argued that Frixon, Choi, Koohgoli, and Lopez are non-analogous art, and that Koohgoli and Choi teach away from the combinations.

In re McLaughlin

The final Office Action cited In re McLaughlin for the statement that "[a]ny judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it ... does not include knowledge gleaned only from applicant's disclosure, such a reconstruction is proper." Applicants respectfully submit that the final Office Action has improperly relied on hindsight reconstruction by using knowledge gleaned only from Applicant's disclosure in modifying the applied references.

¹⁴ In re Keller, 208 USPO 871, 882 (CCPA 1981).

¹⁵ In re McLaughlin, 170 USPQ 209, 212 (CCPA 1971).

CONCLUSION

Applicants respectfully submit that all of the pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is invited to telephone the below-signed attorney at 612-373-6973 to discuss any questions which may remain with respect to the present application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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